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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/908,970	07/19/2001	Takeshi Sekiya	CANO:032	6816

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EXAMINER

LEE, CHEUKFAN

ART UNIT PAPER NUMBER

2622

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/908,970

Applicant(s)

SEKIYA ET AL.

Examiner

Cheukfan Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 19 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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1. Claims 1- are pending. Claims 1 and are independent.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-11, 13, 15, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Rotter et al. (U.S. Patent No. 6,134,496).

Regarding claim 1, Applicant's admitted prior art discussed on page 2, line 2 to page 3, line 22 is an original conveying apparatus that comprises all limitations claimed except for the volatile storage means and the writing means that writes only to the volatile storage means and not to the nonvolatile storage means when the correction value has not changed by at least a predetermined amount relative to a correction value before adjustment by the adjustment means.

Discussed on page 2, line 2 to page 3, line 22, Applicant's prior art apparatus comprises conveying means (ADF) of an image forming apparatus (copier or printer), for conveying an original to an image reading section (page 2, lines 2-8), original detecting means comprising a light-emitting section and a light-receiving section (page

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2, lines 12-21), adjustment means for adjusting a light amount from the light-emitting section (page 2, lines 22-26), a nonvolatile storage means (EEPROM) for storing a correction value (adjustment value) of the light amount adjusted by the adjustment means, even when the power supply is off (page 2, line 27 to page 3, line 2). Writing means is inherent for writing the correction value to the EEPROM.

Applicant's prior art differs from the claimed invention in that the prior art does not teach a volatile storage means which permits electrical writing and erasure, for storing the correction value, and that the writing means does not write the correction value only to the volatile storage means and not the nonvolatile storage means when the correction value has not changed by at least a predetermined amount relative to a correction value before adjustment by the adjustment means as claimed.

The concept of writing a correction value only to a volatile storage means and not to a nonvolatile storage means when the correction value has not changed by a predetermined amount relative to a correction value before adjustment is taught by Rotter et al. (col. 4, line 64 to col. 5, line 3). The correction values are written in a RAM (volatile) or, in the case of greater deviations from the actual stored values, also written in the EEPROM (nonvolatile) so that correction values remain preserved (even after switching-off of the ignition).

Though writing of correction values into the two storage means of Rotter et al. is applied in automatic vehicle control that the correction values are pressure correction values, Rotter et al. teaches the concept of not storing or writing the correction value to the nonvolatile storage means (EEPROM) but only to the volatile storage means (RAM)

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unless the difference or deviation is greater than a predetermined value. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to write the correction value of Applicant's prior art only to the volatile storage means and not the nonvolatile storage means when the correction value has not changed by the predetermined amount in order to reduce the number of times of writing to the EEPROM.

Regarding claim 3, as discussed above, the volatile storage means comprises a RAM and the nonvolatile storage means comprises an EEPROM.

Regarding claim 4, see Applicant's prior art image forming apparatus having the original conveying apparatus in the prior art discussion (page 2, lines 2-10).

Claims 5 and 6 are rejected as being a method claim corresponding to the rejected apparatus claims 1 and 2, respectively.

Regarding claim 7, the claim recites limitations similar to those of claim 1. Based on the reasons of obviousness given for claim 1 on the claimed "writing means" for writing, or not writing, to the volatile storage means and nonvolatile storage means, a storage control device is inherent in the apparatus of Applicant's admitted prior art in view of Rotter et al., which reads on the claimed storage control device. The RAM and EEPROM of Applicant's prior art in view of Rotter et al. reads on the claimed volatile

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first storage device and nonvolatile second storage device, respectively. As to the limitation "inhibiting writing to said second storage device ... when the data ... has not changed by at least a predetermined amount ..., one of ordinary skill in the art would have understood that not writing to the nonvolatile storage means when the value has not changed by at least a predetermined amount in claim 1 means virtually the same thing as inhibiting writing to the nonvolatile storage means under the same condition. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to inhibiting writing to the EEPROM (second storage) of Applicant's prior art in view of Rotter et al.

Regarding claim 8, though Rotter et al. does not explicitly disclose the terminology "permits writing", one of ordinary skill in the art would have understood that "writing to" the volatile storage means (RAM) is virtually the same thing as "permits writing" to the RAM (first storage means or device) in the discussions for claims 1 and 7. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to permit writing to the first storage device each time adjustment or correction of light amount is performed.

Regarding claim 9, comparing means is inherent in Rotter et al. in producing the "deviation" between the correction value and an actually stored value (col. 4, lines 64-67). Based on the reasons of obviousness given for claims 1 and 7, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the

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comparing means to compare the correction value or the data relating to the correction value and written to the RAM (volatile or first storage device) with the correction value or data relating to the correction value and written to the EEPROM (nonvolatile or second storage device), in order to produce the deviation or difference between the two data or values, which deviation or difference is applied in the determination on whether or not to inhibit writing the data or correction value to the EEPROM (second storage device).

Regarding claim 10, the inherent storage control device (inherency discussed for claim 7) is responsive to the determination from the comparison result that the correction value or data relating to the correction value is has changed by at least the predetermined amount discussed above, for permitting writing to the EEPROM (second storage device) as discussed above.

Regarding claim 11, all claimed limitations are included in Applicant's admitted prior art image forming apparatus (page 2, line 2 to page 3, line 22).

Regarding claim 13, all claimed limitations are included in Applicant's admitted prior art image forming apparatus including the image forming section main body and sheet detection sensor (page 2, lines 15-20).

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Regarding claim 15, all claimed limitations are included in Applicant's admitted prior art image forming apparatus including the sheet processing device and sheet detecting sensor (page 2, lines 12-21).

Regarding claim 17, see RAM and EEROM of Applicant's admitted prior art in view of Rotter et al. discussed for claim 1 and claim 7.

Claim 18 is rejected as being a method claim corresponding to the rejected apparatus claim 7.

Claim 19 claims computer-readable storage medium storing a program for causing a storage control device that control writing of data in the manner as that by the storage control device of claim 7 discussed above.

Applicant, in discussing the prior art, does not discuss a computer readable storage program as claimed. Although neither Applicant nor Nabeshima et al. does not disclose a computer-readable storage medium storing a program, one of ordinary skill in the art would have realized the fact that implementing a program for the control by the storage control device would enable easy handling of such a storage control step because the program is stored in a computer-readable storage medium. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a computer program for the control step and store it in a computer-readable storage medium for the purpose of easy handling.

Claim 20 is rejected for the reasons given for claim 7. Claim 20 uses different phrases to claim an invention that is of the same content of claim 7. Please refer to also discussion for claim 1. Specifically, claim 20 uses "a difference between" and "smaller than a predetermined value" to describe the comparison between two values, while claim 7 uses "when the data" and "as not changed by at least a predetermined amount" for describing the comparison. However, one of ordinary skill in the art would have understood that the language of claim 20 is just another way to describe the same thing of claim 7.

In addition, the "allowing writing" limitation is met by the Applicant's admitted prior art in view of Rotter et al. since Rotter et al. specifically discloses storing the correction value in the EEPROM when the deviation between the correction value and the stored value is greater (than a predetermined value) (Rotter et al., col. 4, line 64 to col. 5, line 3).

Claim 21 is rejected as being a method claim corresponding to the rejected apparatus claim 20.

4. Claims 2, 12, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Rotter et al. (U.S. Patent No. 6,134,496), Nabeshima et al. (U.S. Patent No. 6,330,083) and well known art.

Applicant's admitted prior art in view of Rotter et al. is discussed for claim 1 above.

Regarding claim 2, Applicant's admitted prior art does not include performing the adjustment of the light amount by the adjustment means immediately after a power supply to the original conveying apparatus has been turned on and after a predetermined time period has passed after the original conveying apparatus has moved into a standby mode.

Nabeshima et al. discloses an image reading device for performing light quantity detection and correction. In one exemplary embodiment, light quantity adjustment is performed when turning on the power (col. 10, lines 29-31). An optimum light control value to be set for controlling the light quantity of the light source is determined from the peak value of an obtained light quantity variation curve, while a lighting control value for the lighting control inverter is set and stored in a storage (col. 24, lines 25-33).

Please note that Nabeshima et al. also discloses the use of a timer and several options on setting the timing for light quantity correction or adjustment, including a timing set based on the document read number (counted with a counter), a timing set based on the lighting time of the light source, etc. (col. 21, lines 28-65 and col. 22, lines 50-65). This means that Nabeshima et al. provides flexibility on the timing of light quantity adjustment or correction. Although Nabeshima et al. does not explicitly disclose a standby mode of the apparatus, the examiner took Official Notice of the fact that in general image reading apparatuses and copying machines have a standby mode, which is timed for various control purposes. Given the flexibility on light quantity

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correcting/adjustment timing and use of timer, one of ordinary skill in the art would have realized the advantage of having the correcting or adjustment performed in a standby mode of the apparatus after a short period of time in the standby mode, which is to save wait time of the user as compared to performing the adjustment in a normal operation mode in which the apparatus is used more often.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to set up a standby mode in the apparatus of Applicant's admitted prior art in view of Nabeshima et al. and provide with a timer to set a predetermined time period within the standby mode time period as is well known in the art, so that the adjustment or correction is performed a predetermined time period into the standby mode, in order to free the machine for copying in its normal mode and thus save the user wait time.

Regarding claim 12, see discussion for claim 2, for claim 12 recites the limitations of claim 2.

Claim 14 is rejected for the same reason and reason of obviousness given for claim 2 above, noting the inherency in Nabeshima et al. that power supplied to the apparatus means power supplied to all main components of the image forming apparatus including the original conveying apparatus (of claims 1 and 2) and the image forming section of claim 14 (Nabeshima et al., col. 10, lines 29-31).

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Claim 16 is rejected for the same reason and reason of obviousness given for claim 2 above, noting the inherency in Nabeshima et al. that power supplied to the apparatus means power supplied to all main components of the image forming apparatus including the original conveying apparatus (of claims 1 and 2) and the sheet processing device of claim 16 (Nabeshima et al., col. 10, lines 29-31).

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kellogg (U.S. Patent No. 6,445,984) discloses a control method, a preferred method for limiting writes to an EEPROM (66) by performing a comparison between a stored adjustment in an EEPROM and the current adjustment in RAM (68) and if the absolute difference between these two adjustment values is greater than a predetermined maximum value, the current adjustment stored in the RAM (68) is stored in the EEPROM (66) (col. 8, lines 32-59).

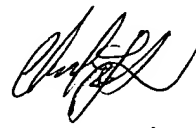
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (703) 305-4867. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cheukfan Lee
March 19, 2005


Cheukfan Lee